REMARKS

I. Status of the Application and Summary of the Office Action

This paper is filed in response to the final Office Action mailed May 21, 2004. Reconsideration of this application is respectfully requested. Claims 1-39 are presented for examination, and claims 40-41 have been cancelled in response to the restriction requirement. Claims 1, 31, 32, 33, and 38 are independent. Claim 32 has been amended and the designation for claim 33 has been corrected to reflect that it was previously amended.

The Office Action rejects the claims (except for claim 32) as unpatentable in view of Fish (U.S. Pat. No. 6,035,294), alone or in combination with other references. Claim 32 was rejected as unpatentable in view of Wical, cited in the previous Office Action. Applicant has amended claim 32 in a manner consistent with the manner in which the other independent claims were amended following the previous Office Action.

Applicant thanks the Examiner for the telephone interview conducted on July 20, 2004, during which the pending application, the claims, and Fish were discussed. The discussion focused on the Examiner's contention that Figure 1 of Fish teaches what is recited in claim 1.

II. Discussion

Applicant will focus this discussion on claim 1, which relates to a method for searching a collection of items, wherein each item in the collection has a set of properties. The claim includes "obtaining a query composed of a first set of one or more properties." The claim goes on to recite "obtaining a result based on applying a distance function to the query and an item in the collection having a second set of one or more properties." As an example, the patent describes a movie database, in which the properties might include the director, the genre, and the star of the movie. A query might be, for example, movies in which the director is Stephen Spielberg, the genre is action, and the star is Richard Dreyfuss. Thus, in this example, the first set of one or more properties is {director = Stephen Spielberg, genre = action, star = Richard Dreyfuss}. The item in the collection might be the movie *Raiders of the Lost Ark*, in which the director is Stephen Spielberg, the genre is both action and adventure, and the stars are Harrison Ford and Karen Allen. Thus, in this example, the second set of one or more properties is

{director = Stephen Spielberg, genre = action, genre = adventure, star = Harrison Ford, star = Karen Allen}.

The last two paragraphs of claim 1 include two elements relating to the result based on applying the distance function. First, "obtaining a result includes determining a third set of properties common to the first set of one or more properties and the second set of one or more properties." Using the above example, the third set of properties common to the first set of one or more properties and the second set of one or more properties is the set {director = Stephen Spielberg, genre = action}. The other properties in the query or the movie in this example are not common to both.

Finally, the claim provides that "the distance function determines a distance between the query and an item in the collection based on the number of items in the collection that are associated with all of the properties in the third set of properties." This is a separate element from determining a third set of properties. Using the above example, the distance between the query and *Raiders of the Lost Ark* is based on the number of items in the collection (in this example, the collection is a movie database) that are associated with all of the properties in the third set of properties. That is, the number of movies in the collection in which the director is Stephen Spielberg and the genre is action.

Thus, the last two paragraphs of claim 1 include both "determining a third set of properties common to the first set of one or more properties" and determining "a distance between the query and an item in the collection based on the number of items in the collection that are associated with tall of the third set of properties."

The other independent claims have similar elements relating to the distance function.

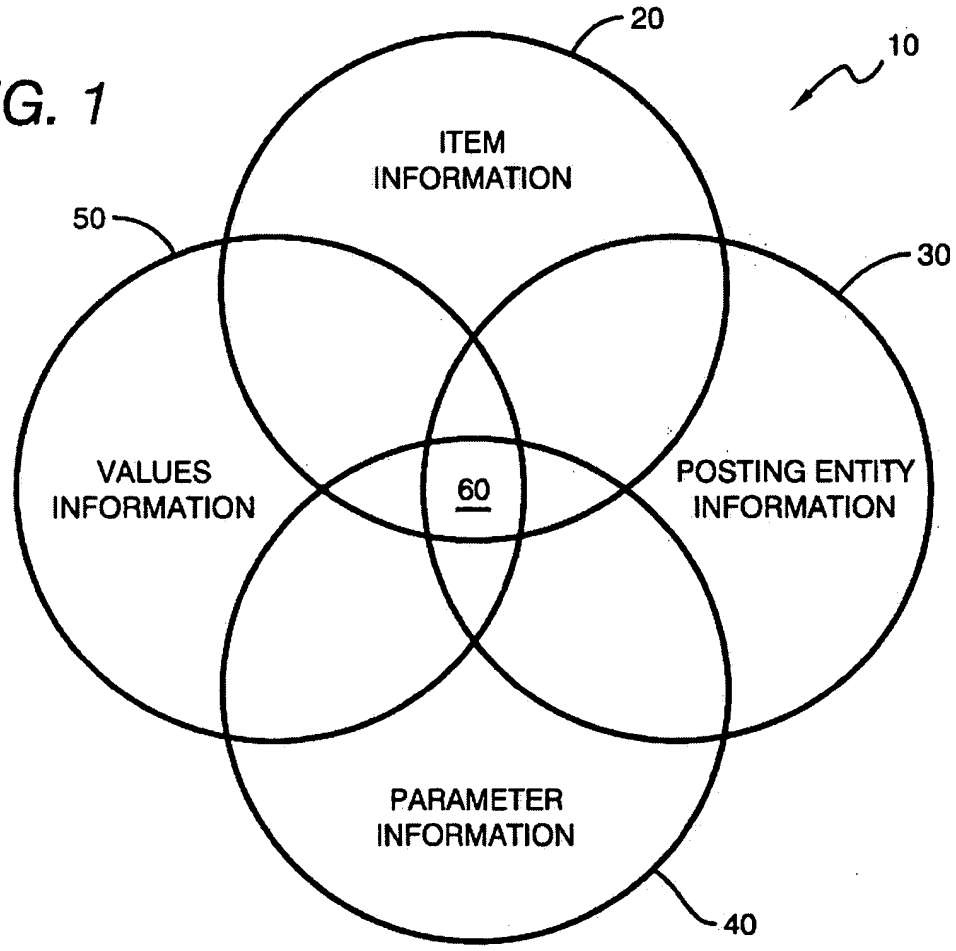
In the Office Action, the Examiner cited generally to col. 4, lines 1-42, of the Fish patent for all the elements, and to various parts of columns 5, 6, 9, and 10, as well as Figures 3B and 3C of Fish in support of the rejection. Although the discussion during the interview focused on the first paragraph of column 4 and Figure 1, Applicant will address the other portions as well.

Fish describes Figure 1 as a "Venn diagram of data in a preferred database." The discussion of Figure 1 states, in its entirety:

> In FIG. 1, a preferred database 10 generally includes four intersecting sets of information, item information 20, posting entity information 30, parameter information 40 and values information 50. The intersection 60 of these sets 20, 30, 40, 50 represents records of particular interest to a user.

These terms are not described elsewhere in the patent. Figure 1 is reproduced below:

FIG. 1



Applicant submits that this information simply is insufficient, under any reading, to teach or suggest the elements of claim 1. In fact, the meanings of the terms "item information," "posting entity information," "parameter information," and "values information" is not clear

from the patent, but would appear to refer to different types of information found in a database. There is no suggestion that these types of information refer to a set of properties for a query or to a set of properties for an item in a collection, as opposed to a general reference to the types of data found in a database.

Even if items 20, 30, 40, and 50 could be construed to refer to sets of properties for a query and an item (or to sets of properties for two items, as provided in other independent claims), Figure 1 would simply show the intersection of two or more sets of properties, which could correspond to a third set of properties. It could not, in this scenario, also teach determining a distance "based on the number of items in the collection that are associated with all of the third set of properties." That would require a separate discussion or figure representing the items in the collection, which is not present.

The remainder of Fish does not fill in this missing detail. The discussion around Figures 3B and 3C, for example, shows an entered item description (134) and entries in which the "major class" 136B, the "minor class" 136C, or the "item description" 136D in an item classification hierarchy matches the entered item description. The "frequency" column in Figure 3 (also described as "usage") relates to the extent of past usage of various choices (see, e.g., col. 5, lines 26-46).

This is not, and could not be, a reference to the "number of items in the collection that are associated with all of the properties in the third set of properties," as provided in the last paragraph of claim 1. Fish does not teach or suggest this element. In, for example, Figure 3B, the item description "sport utility vehicles" is common to all of the rows. If the "frequency" column referred to the number of items in the collection associated with "sport utility vehicles," then the "frequency" values in column 126E of Figure 3 would need to be the same for each row in a particular Figure because in each row the frequency value would refer to the number of items in the *collection* having a certain set of properties – in this example, the set {sport utility vehicles}. However, the frequency value is different in different rows, demonstrating that it could not refer to the number of items in the collection having a certain set of properties as in the claim.

III. Conclusion

Claims 1-39 are believed to define allowable subject matter. Reconsideration is earnestly solicited. If there are any remaining issues, the Examiner is urged to contact the undersigned at the telephone number listed below.

The Commissioner is authorized to charge Deposit Account No. 08-0219 for any fees that may be due in connection with this paper.

Respectfully submitted,

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